Stormwater Evaluation

- What are our objectives?
- What considerations are shaping our effort?
- What is our path forward?
- How does this line up with RI/FS timeline?

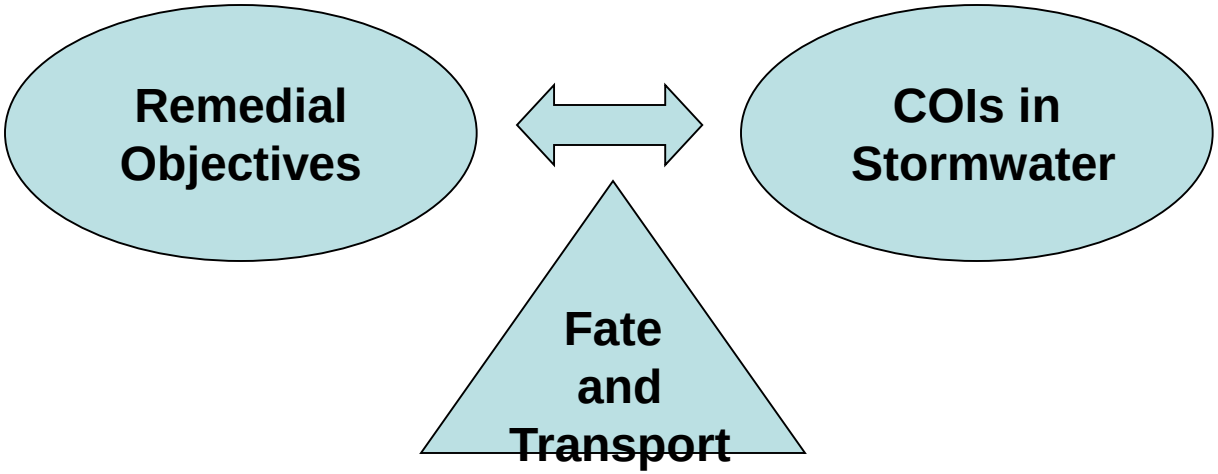
Objectives

- Move the conversation forward toward developing a common vision for evaluating the stormwater pathway
- Ensure LWG will have stormwater data of sufficient quantity and quality to complete the in-water RI/FS
- Investigate use of Fate and Transport model as a tool for evaluating stormwater impacts at various scales
- Improve understanding of the extent to which stormwater is part of the “problem”
- Guide development of workplans to collect necessary stormwater data
- Create a mechanism for relating RI data to source control efforts

Considerations

- Little information currently available about the load of COIs entering Portland Harbor via stormwater
- Lack of empirical data on how stormwater discharges affect water column and sediment concentrations in PH
- Remedial Objectives not established yet; don’t have a target to shoot for
- Variable nature of stormwater makes it challenging to characterize
- The more significant stormwater is as a source, the more data will be needed to provide confidence for decision-making

Stormwater Evaluation in a Nutshell

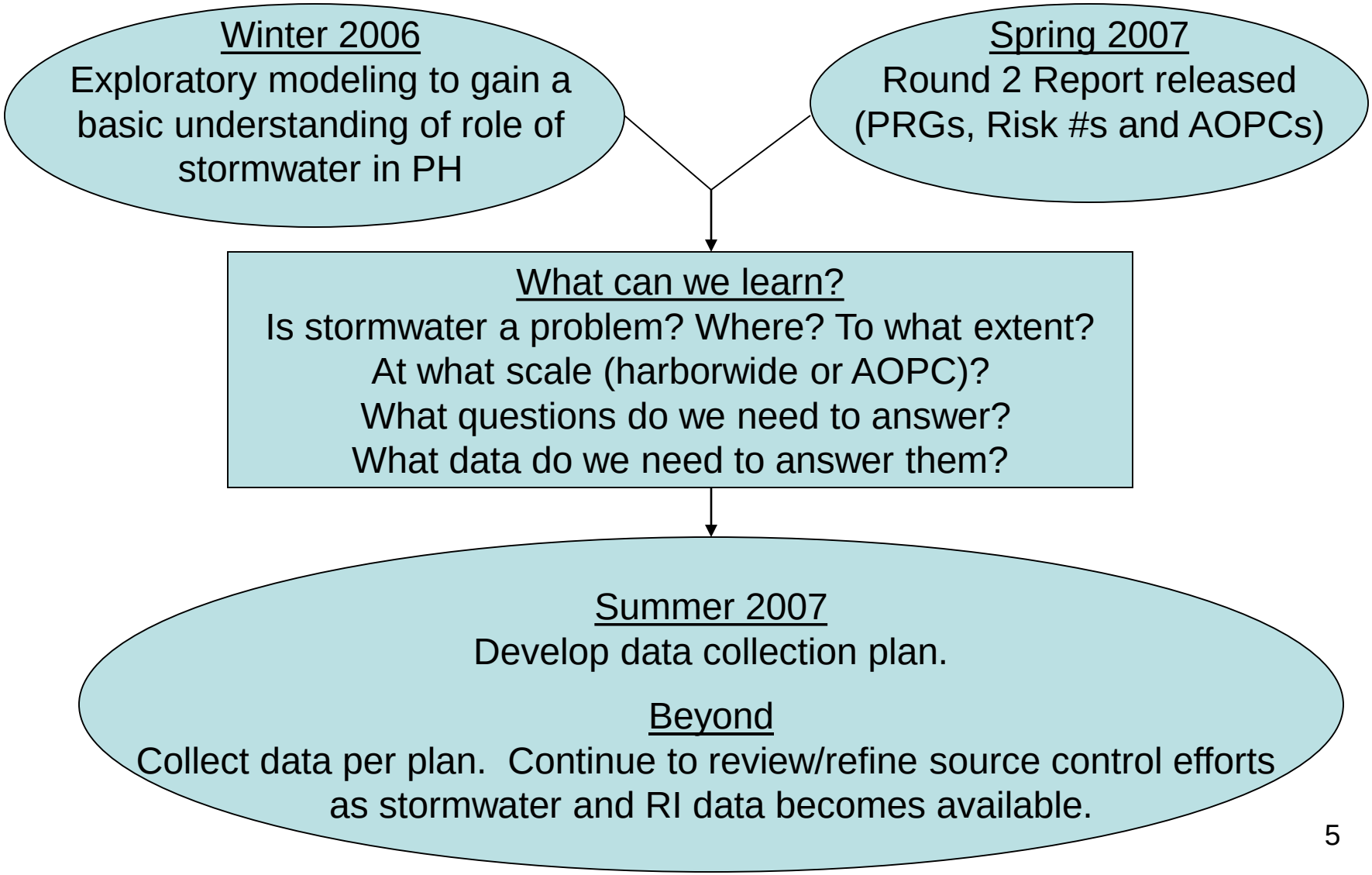


What happens to stormwater once it reaches the river?

How does this relate to the Remedial Objectives for water and sediment?

How much source control is enough?

Path Forward



Initial Modeling Objectives

- Learn more about how the Fate and Transport model works and what it can do for us
- Get very rough sense of relative impact of stormwater on PH water and sediments
- Use info to help shape next steps, such as:
  - What model runs do we want to do next?
  - What data gaps do we need to fill?
  - What are our data quality objectives?

Stormwater Modeling

Data sources for initial model runs:

- Use City's Grid model to estimate volume of runoff from ISA
- Use existing stormwater data to ballpark range of COI concentrations in stormwater, or use literature values

Concentration x Volume = Loading

What questions could we ask?

- What concentration of a COI in stormwater would it take to recontaminate sediment in 5/10/50 years?
- How long would it take to recontaminate sediment if we assumed a “typical” concentration?
- What concentration does it take to cause a “signal” in fish? [Link F&T model to Food Web model]

What do we hope to find out?

By integrating model output with info from Round 2 Report:

- How “sensitive” is the system to stormwater inputs, relative to inputs of COIs from other sources?
- How “clean” does stormwater runoff need to be to avoid causing harborwide (water column) risk?
- Where does stormwater pose a risk for recontaminating sediment?

How will we use info?

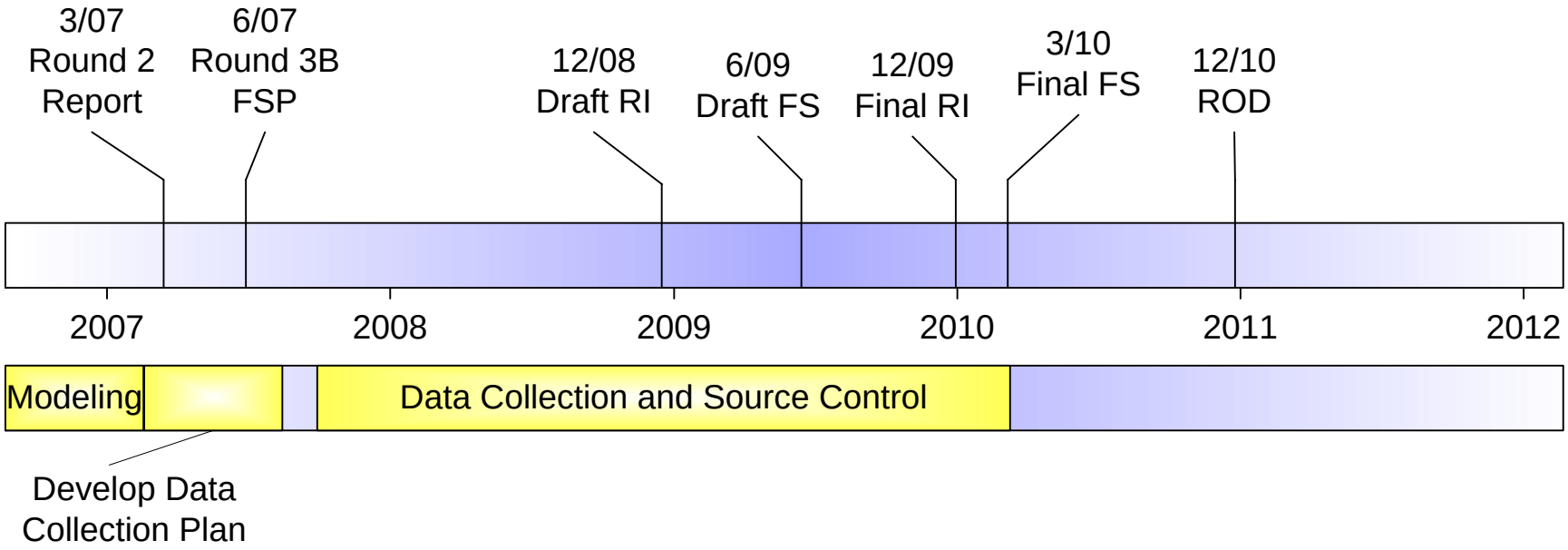
- Identify areas/outfalls where more stormwater data is needed. Define data quality objectives and develop data collection plan.
- Review and revise source control strategy and priorities as necessary.
- Establish targets for evaluating adequacy of source control efforts and long term stormwater management tools (permits)

How reliable is the model output?

- Need to keep asking the question
- Look for ways to verify model and/or alternative methods for evaluating stormwater impacts

Timeline

ROD TIMELINE



STORMWATER EVALUATION AND SOURCE CONTROL TIMELINE